

## ABSTRACT

A characteristic value identification method and an apparatus therefor which can develop each model to be integrated into an entire model, similar to a product in which individual parts are combined, are provided. A functional model of a part is prepared based on a potential quantity and a flow quantity representing a strength and a quantity of energy applied to the part, a steady internal characteristic value of the functional model in a steady state is identified, and a transient internal characteristic value of the functional model in a transient state is identified by using the identified steady internal characteristic value. Furthermore, the functional model having the characteristic value identified by such an identification apparatus is incorporated into a virtual testing system as a virtual prototype, an internal characteristic value of the virtual prototype is evaluated by providing a driving operation condition and an environment condition, actual machine test data obtained by the driving operation condition and the environment condition are compared with the internal characteristic value, and a re-identification is performed depending on the comparison result if necessary.